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10/629,375	07/28/2003	Fang Hao	Hao 1-2-4 (LCNT/125103)	6538

EXAMINER
WILSON, ROBERT W

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/9/09*.

2a)☒ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1-3, 6, 10, 11-12, 15-17, 19-20, 23-24, & 26-28 are rejected under 35 U.S.C.

103(a) as being unpatentable over Chen (U.S. Patent No.: 6,567,380) in view of Zaumen(U.S.

Patent No.: 5,881,243)

Referring to claim 1, Chen teaches: a method for improved inter-domain routing convergence
(Router per Fig 3 performs the method utilizing the message formats per Figs 5 & 6 of Chen)
comprising:

transmitting information from a node toward at least one other node, wherein the information is
associated with a route update or withdraw wherein the information is adapted to enable
identification of candidate routes affected by an event (Figure 5 shows the message listing
withdrawn routes which are candidate routers . This message is transmitted between peer routers
per col. 2 lines 1-2 and per col. 5 lines 51 to col. 6 lines 9)

Chen does not expressly call for: transmitting a reason information comprising a reason affected
by an event that trigger the route update or withdraw

Zaumen teaches: transmitting a reason information comprising a reason affected by an event that
trigger the route update or withdraw (linkup, linkdown, linkchange which are reasoned
information that is triggered by link status change or event per col. 7 lines 55 to col. 8 line 55 and
per col. 12 lines 42 to col. 13 line 14))

It would have been obvious to one of ordinary skill in the art at the time of the invention to add
transmitting a reason information comprising a reason affected by an event that trigger the route
update or withdraw of Zaumen to the routing message of Chen in order to provide additional
message information between the routers by providing a specific reasoning why the routes are to
be withdrawn.

In addition Chen

Regarding claim 2, wherein said reason information transmitted along with said route update or withdraw (withdrawn routes are defined in Fig 5)

Referring to claim 3, the combination of Chen and Zaumen teach: the method of claim 2 and reason for update or withdraw wherein the information is encoded as a code and Chen teaches: multiple fields can be used to send information per Fig 5 (Three of these fields would be considered a triplet)

Regarding claim 6, wherein a node receiving said reason information uses said reason information to determine which candidate routes of the received node are also affected by the same even that triggered the initial route update or withdrawn and which candidate routes of said node are not affected (after receiving the routing update message such as withdraw routes which implicitly carries a reason for the withdraw of routes the receiving router inherently assess the routes in its routing table determines which routes the table are affected per col. 6 line 50 to col. 8 line 25)

Regarding claim 10, further comprising transmitting version information for the route update or withdraw (Version per Fig 8)

Regarding claim 11, wherein the version information comprises a version of the update or withdraw for each node pair and the change in node pairs form the route previously advertised (Version per Fig 8 applies to all update messages)

Regarding claim 12, wherein a node receiving said version information uses said version information to determine the stability of said receiving node (Chen per col. 6 lines 10 to col. 8 line 9)

Referring to claim 15, Chen teaches: a apparatus for improved inter-domain routing convergence (Transmitting Router & receiving router per Fig 1 which are shown individually per Fig 3 or apparatus of Chen) comprising:

means for identifying routes to be update or withdraw wherein the information is adapted to enable identification of candidate routes (Route processor per Fig 3 or means for identifying and which identifies the routes to be withdrawn which are candidate routes per message shown in per Figure 5)

means for transmitting toward at least one neighbor (Network interface per Fig 3. The message is transmitted toward a peer router per col. 2 lines 1-2 and per col. 5 lines 51 to col. 6 lines 9)

Chen does not expressly call for: transmitting a reason information comprising a reason affected by an event that trigger the route update or withdraw

Zaumen teaches: transmitting a reason information comprising a reason affected by an event that trigger the route update or withdraw (linkup, linkdown, linkchange which are reasoned information that is triggered by link status change or event per col. 7 lines 55 to col. 8 line 55 and per col. 12 lines 42 to col. 13 line 14))

It would have been obvious to one of ordinary skill in the art at the time of the invention to add transmitting a reason information comprising a reason affected by an event that trigger the route update or withdraw of Zaumen to means for identifying and means for transmitting associated with the routing message of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Referring to claim 16, the combination of Chen and Zaumen teach: the apparatus of claim 15 and Chen teaches: means for receiving information associated with a received update or withdrawn (Network Interface per Fig 3 receives withdraw message per Fig 5)

means for using said received information to determine which candidate route are affected by the event that triggered the route update or withdrawn and which candidate routes are not affected (The ROUTE PROCESSOR per Fig 3 or means for using processing the withdrawn route information. Withdrawn information which was received due to a triggered event as well as other updates such as flags per Fig 5 or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Chen does not expressly call for: reason information and the event that triggered the update

Zaumen teaches: reason information and the event that triggered the update (linkup, linkdown, linkchange which are reasoned information that is triggered by link status change or event per col. 7 lines 55 to col. 8 line 55 and per col. 12 lines 42 to col. 13 line 14))

It would have been obvious to one of ordinary skill in the art at the time of the invention to add reason information and the event that triggered the update of Zaumen to means for receiving and means for determining of Chen and Bi in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Regarding claim 17, wherein said candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn.   Any route that has been withdrawn will inherently be a transient route and the receiving router labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9)

  Regarding claim 19, further comprising means for transmitting version information for the route update or withdraw (NETWORK INTERFACE per Fig 3 (means for transmitting) and Version Pg 8 of RFC 171)

Regarding claim 20, further comprising:

means for receiving version information; with an update or withdraw (NETWORK INTERFACE per Fig 3 or means for receiving) and

means for using said received version information to determine the stability of its candidate routers (ROUTE PROCESSOR per Fig 3 (means for using) and RFC 1771 teaches receiving version number and Chen teaches determining stability based on version per col. 6 lines 10 to col. 8 line 9)

Referring to claim 23, Chen teaches: a communication network having improved inter domain routing convergence (Fig 1 per Chen or network) comprising a plurality of network devices (Fig 1 of Chen has a plurality of routers or network devices) each of said network devices comprising a processor and a memory (Each of the routers per Fig 1 are represent by Fig 3 which has a processor and a memory)

transmitting information associated with a route update or withdraw to neighboring apparatus wherein the reason information comprises a reason for the route update or withdraw, wherein the reason information comprises a reason for the route update or withdraw (Network interface in Router per Fig 3 transmits message which defines routes to be withdrawn per Fig 5)

receiving a reason information associated with a received update or withdraw (Router per Fig 3 has a network interface which receives message which defines routes to be withdrawn per Fig 5)

 using said received information to determine which candidate routes are affected by the same event that triggered the receive route update or withdrawn and which candidate route are not affected (The receiving router uses withdrawn route information to update routing table based upon list of IP address. Withdrawn information which was received due to a triggered event as well as other updates such as flags per Fig 5 or the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Chen does not expressly call for: reason information and the event that triggered the update

Zaumen teaches: reason information and the event that triggered the update (linkup, linkdown, linkchange which are reasoned information that is triggered by link status change or event per col. 7 lines 55 to col. 8 line 55 and per col. 12 lines 42 to col. 13 line 14))

It would have been obvious to one of ordinary skill in the art at the time of the invention to add reason information and the event that triggered the update of Zaumen to transmitting and receiving of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Regarding claim 24, wherein a candidate route is considered as a transient route if said apparatus determined from said received reason information that said candidate route is to be updated or withdrawn (The receiving router evaluates with routes have been updated or withdrawn a labels the routes in the table with a TA (transient attribute) transient indicator per Fig 9. Any update associated with withdraw is inherently transient)

Referring to claim 26, Chen teach: computer readable medium storing a set of instructions which when executed by a processor perform the method (Memory per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen) wherein said instructions are executed on a processor (Processor per Fig 3 and per col. 4 line 43 to col. 5 line 4 of Chen)

transmitting information associated with a route update information wherein the information is adapted to enable identification of candidate routes for update or withdraw
 (Figure 5 shows the message listing withdrawn routes which are candidate routes which enable the receiving router to identify candidate routers for update or withdraw. This message is transmitted between peer routers per col. 2 lines 1-2 and per col. 5 lines 51 to col. 6 lines 9)

Chen does not expressly call for: transmitting a reason information comprising a reason affected by an event that trigger the route update or withdraw

Zaumen teaches: transmitting a reason information comprising a reason affected by an event that trigger the route update or withdraw (linkup, linkdown, linkchange which are reasoned information that is triggered by link status change or event per col. 7 lines 55 to col. 8 line 55 and per col. 12 lines 42 to col. 13 line 14))

It would have been obvious to one of ordinary skill in the art at the time of the invention to add transmitting a reason information comprising a reason affected by an event that trigger the route update or withdraw of Zaumen to the routing message of Chen in order to provide additional message information between the routers by providing a specific reasoning why the routes are to be withdrawn.

Referring to claim 27, the combination of Chen and Zaumen teach the computer readable medium of claim 26 and Chen teaches: receiving information associated with a received update or withdrawn (Network Interface per Fig 3 receives withdraw message per Fig 5)

using said received information to determine which candidate routes are also affected by substantially the event that triggered the route update or withdrawn and which candidate routes are not affected (The ROUTE PROCESSOR per Fig 3 processing the withdrawn route information. Withdrawn information which was received due to a triggered event as well as other updates such as flags per Fig 5 or substantially the same event to determine what route candidates are updated in its table and which router are not updated in its tables per col. 5 line 51 to col. 8 line 9)

Chen does not teach: receiving reason information with event that triggered the update

Zaumen teaches: receiving reason information with event that triggered the update ((linkup,
linkdown, linkchange which are reasoned information that is triggered by link status change or
event per col. 7 lines 55 to col. 8 line 55 and per col. 12 lines 42 to col. 13 line 14))

It would have been obvious to one of ordinary skill in the art at the time of the invention to add
receiving reason information with event that triggered the update of Zaumen to means for
receiving and means for determining of Chen and Bi in order to provide additional message
information between the routers by providing a specific reasoning why the routes are to be
withdrawn.

Regarding claim 28, wherein said candidate route is considered as a transient route if said
apparatus determined from said received reason information that said candidate route is to be
updated or withdrawn (The receiving router evaluates with routes have been updated or
withdrawn. Any route that has been withdrawn will inherently be a transient route and the
receiving router labels the routes in the table with a TA (transient attribute) transient indicator
per Fig 9)

4.   Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (U.S. Patent

No.: 6,567,380) in view of Zaumen (U.S. Patent No.: 5,881,243)

Referring to claim 5, the combination of Chen and Zaumen teach the method of claim 1 and
reason information

Chen does not expressly call for: change in cost of link between two nodes

Zaumen teaches: change in cost of links between two nodes (update message cost of links per
col. 1 lines 47 to 52)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add
the change in cost of links between two nodes of Zaumen in place of a reason information of the
combination of Chen and Zaumen in order to communicate the cost of the change of link.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

6.   Claims 15-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

Referring to claim 15, 16, & 20, claim 15, 16, & 20 are directed to a means. On page 10 lines 11
to lines 29 applicant has state that the process steps are performed by software; therefore,
applicant is claiming a software. Software is non-statutory subject matter.

Double Patenting

7.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection
is appropriate where the conflicting claims are not identical, but at least one examined
application claim is not patentably distinct from the reference claim(s) because the examined
application claim is either anticipated by, or would have been obvious over, the reference
claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re
Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re
Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
        A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may
be used to overcome an actual or provisional rejection based on a nonstatutory double patenting
ground provided the conflicting application or patent either is shown to be commonly owned
with this application, or claims an invention made as a result of activities undertaken within the
scope of a joint research agreement.
        Effective January 1, 1994, a registered attorney or agent of record may sign a terminal
disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR
3.73(b).

8.   Claims 1& 2 are provisionally rejected on the ground of nonstatutory obviousness-type
double patenting as being unpatentable over claim1 of copending Application No. 10/875,124

        Referring to claim 1 of the instant application; claim 1 of application 10/875,124 teaches:
forwarding a transient route notification message marking the route as no longer valid or reason
for update or withdraw which is sent to another inherent router which receives this message

        Regarding claim 2 of the instant application, claim 1 of application 10/875,124 teaches:
route notification message marking the route as no longer valid or reason for update or withdraw
which is sent to another inherent router which receives this message is sent along with the
message

This is a <u>provisional</u> obviousness-type double patenting rejection.

6.   Claims 1& 2 are provisionally rejected on the ground of nonstatutory obviousness-type
double patenting as being unpatentable over claim1 of copending Application No. 10/670,940
Although the conflicting claims are not identical they are not patentably distinct by merely
broadening because claims 1 & 2 of the instant application are broader than claim 1 of
10/670,940. Claim 1 &2 merely broaden the claim language of claim 1 of the instant application
10/670,940 by eliminating RIB receiver and route disqualification logic.

Referring to claim 1 of the instant application; claim 1 of application 10/670940 teaches:
receiving a message which indicates that a route should be withdrawn based upon unreachability
or reason.

Regarding claim 2 of the instant application, claim 1 of application 10/670,940 teaches: route
withdrawn based upon unreachability is sent along with the message

This is a <u>provisional</u> obviousness-type double patenting rejection.

Allowable Subject Matter

7.   Claims 4, 7-9 & 13-14 are objected to as being dependent upon a rejected base claim, but

would be allowable if the obvious double patenting can be rejection can be overcome and if

rewritten in independent form including all of the limitations of the base claim and any

intervening claims.

8.   Claims 18, 21, & 22 are objected to as being dependent upon a rejected base claim, but

would be allowable if the 101 rejection and obvious double patenting can be rejection can be

overcome and if rewritten in independent form including all of the limitations of the base claim

and any intervening claims

9.   Claims 25 & 29 are objected to as being dependent upon a rejected base claim, but

would be allowable if the obvious double patenting can be rejection can be overcome and if

rewritten in independent form including all of the limitations of the base claim and any

intervening claims

Response to Amendment

10.   Applicant's arguments with respect to claim 1-29 have been considered but are moot in

view of the new ground(s) of rejection.   The examiner has provided an additional response in

order to be totally responsive to the applicants remarks. The applicant has changed the scope of

all independent claims so a new ground of rejection is appropriate. Additionally the examiner

points out that the applicant response has not traversed the obvious double patenting rejection.

In order to provide a compact prosecution the examiner is required to write a obvious double

patenting rejection as early in the process. The applicant has failed to provide an argument as to

why the obvious double patenting rejection is not correct at this point so the obvious double

patenting rejection has been maintained.

11.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

          A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Conclusion

12.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ROBERT W. WILSON whose telephone number is (571)272-

3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dang Ton can be reached on 571/272-3171. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert W Wilson/
Primary Examiner, Art Unit 2419

6/13/09